

# Western States Petroleum Association

## Command and Control

- Achieving GHG emissions reduction from the refining sector in California via direct command and control would be costly relative to the levels of reduction to be achieved and would be a very difficult regulatory challenge for CARB and the refineries.



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## CA refineries are already very energy efficient

- CA refineries are some of the most energy efficient in the world
  - Product slate (cleanest burning fuel in the world)
  - Crude slate (CA refineries consume all of CA's heavy crude oil production)
  - Utilization rates (up to 95% utilization)
- We expect that further energy efficiency in CA will be very limited in size and number
- URS 2007 report to the Bay Area AQMD on "Opportunities for GHG Emission Reductions at Stationary Sources" concludes limited size and number of energy efficiency gains
  - NOx rules already require optimized performance of furnaces and boilers
  - Efficiency improvements around 0.5-1%



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Refineries are some of the most complex industrial facilities in the world. CA refineries are even more complex. Each refinery is unique.

- Direct command and control rules of general application will be very difficult to develop and even more difficult to implement
- What is appropriate for one refinery may not be at all viable in another refinery – different configuration, different operations, different crude, different products, different space and land constraints, etc.



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## Refineries are already highly regulated

- Beyond the NOx controls mentioned above, CA refineries are already highly regulated. For example, the URS report states that reductions from flares beyond those already achieved by existing flare rules would be minimal



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## Hurdles and barriers to GHG reductions

- Technologies needed (i.e., CCS) not currently commercially viable
- Permitting hurdles will be significant
- Combined Heat and Power (CHP) has numerous permitting and market barriers
  - It may also increase, rather than decrease, net GHG emissions on site
  - Regulatory driven economic impediments in the form of exit fees for departing load are major hurdles for any potential project
- Refinery configurations, layout, space restraints, operating restraints, and capital restraints, etc.
- Must consider local community inputs for major modifications
- Must consider competing goals – the LCFS may lead refinery modifications that lead to increased facility GHG emissions



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## Cost-effectiveness and technical feasibility hurdles

- Must encompass a large number of very specific refinery, community and air district criteria.
- Requires an open, thoroughly transparent process, with very clear criteria and measurement



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## Timing

- Reduction requirements must consider the timetable for engineering, procurement and installation of new or revamped equipment.
- If modifications of existing process equipment were to be required, the energy supply impact of down time required for commissioning must be considered.



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## Co-pollutant issues

- No refinery to date has been classified a significant risk by any air district
  - CA already has some of the most stringent rules for co-pollutants.
  - MACT measures, air toxic inventory and reduction rules, and air toxics risk program.
  - Facilities must report air toxic emissions, under go an air toxic health risk evaluation where the air districts with oversight and help from CARB and OEHHA must assess the health risks of its nearest neighbor.
  - Facility must undertake a risk reduction effort to reduce its risk or advise its neighbors.
- CA's SIP is an aggressive emissions reductions program that has resulted in significant reductions of SOx, NOx, CO, VOCs and ROG statewide and at facilities.
- Air Toxic and SIP regulations are in place and will continue to regulate non-GHG pollutants.





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## Cap and trade is a better approach to GHG reductions at refineries

- Considering that refineries are very unique, very complex, with a mandated need to produce clean burning fuel, it is more appropriate for the facility to evaluate its GHG reduction opportunities, its operational constraints, its facility constraints, and its capital constraints and implement measures that best fit its unique situation, including timing as necessary.
- CA has a number of very successful "target" driven programs that give facilities the flexibility to achieve reduction goals in the most appropriate manner. A Cap and Trade program for GHG would similarly allow facilities the flexibility to achieve facility specific, least cost reductions.



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## Leakage

- California already imports 20 percent of our fuel. CARB must be highly sensitive to issues and impacts that could lead refinery production shifting to points outside of CA where GHG reductions would not be controlled and which would penalize CA facilities that have shown to investment in CA that have lead to economic growth and jobs in CA.
- It is critical that ARB staff work closely with industry representatives to ensure that an appropriate picture is drawn regarding cost effective and technologically feasible reductions available from California's petroleum industry – refineries and oil fields



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## Energy supply

- Finally, AB 32 requires CARB to work with the CEC and CPUC to ensure sufficient petroleum supply. It is very important that CARB work early and closely with the CEC to ensure implementation of AB 32 in a cost effective and technologically feasible manner that does not lead to energy supply constraints or disruptions.
- CARB must include assessment of overall energy supply impacts and corresponding impacts to the economy as part of the Scoping Plan. To do otherwise could lead to potential consumer and public backlash for the program

